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(54) Top gripping carrier for flanged articles

(57) The invention provides a top gripping carrier (10) for retaining a row of flanged or rimmed articles 'T', comprising a paperboard panel having a central handle portion (11) displaced out of the plane of the panel to cause

opposed lips L to engage the rimmed articles and which is maintained in its displaced configuration by securing together overlapping portions (19, 23:20, 24) of the panel lying generally in the plane of the panel. The overlapping portions are secured together by cooperating locking tabs (21, 25:22, 26).

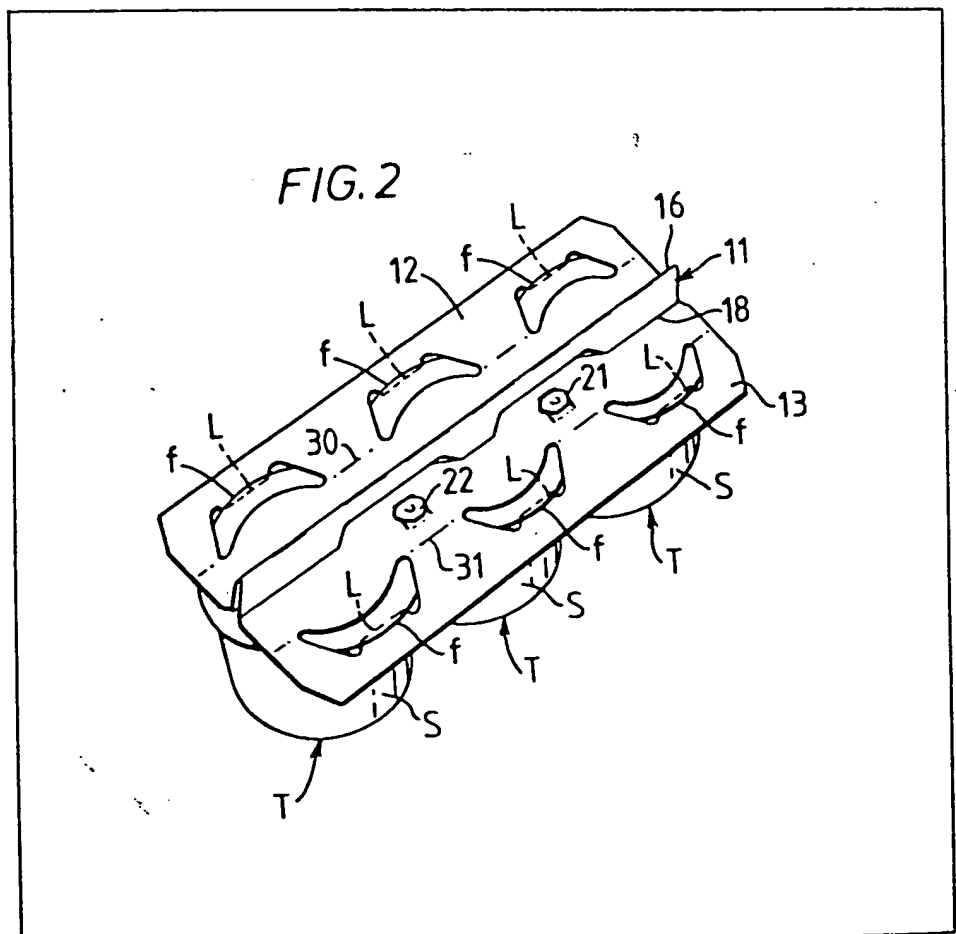
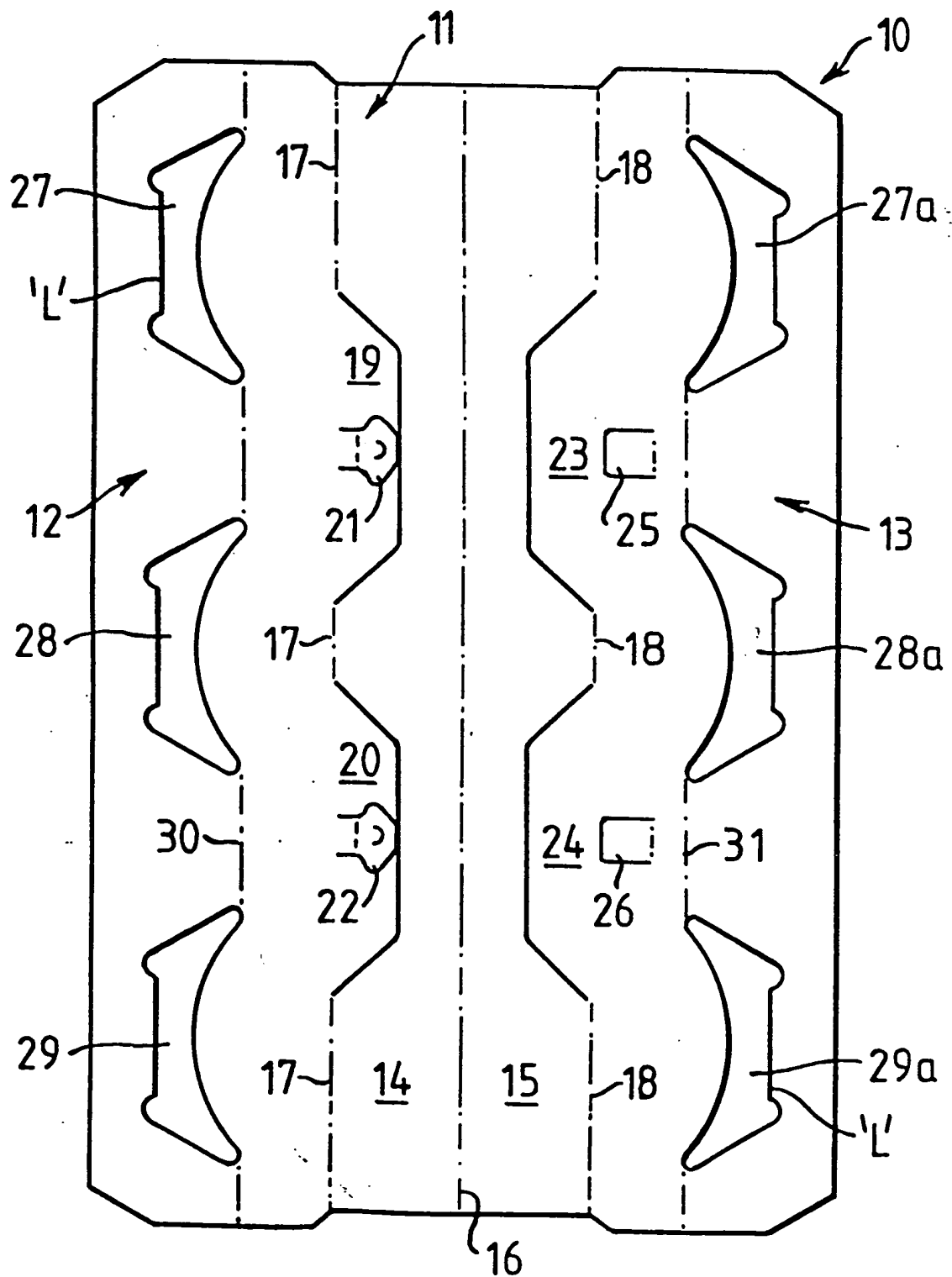


FIG. 1





## SPECIFICATION

### Top-gripping carrier for flanged articles

This invention relates to a top-gripping carrier for holding together a row of articles having flanged or rimmed tops, the row comprising at least two such articles.

The invention is particularly suitable for use with containers generally known as form-fill-seal cups e.g. yoghurt cups, but other articles may be used.

The invention provides a carrier for holding together a row of articles having flanged or rimmed tops, which device comprises a panel formed from foldable sheet material having formed therein for each article a pair of spaced lips for engagement with diametrically opposed portions of the article flange or rim, the lips of each pair being movable towards one another by causing a central part of the panel located between the lips to be displaced out of the plane of the panel, characterized in that the central part is maintained in displaced condition by securing together portions of the panel lying adjacent thereto which portions are overlapped during displacement of the central portion whereby said lips are brought into engagement with the side walls of a suitably sized article beneath the flange or rim to secure that article to the carrier.

According to a feature of the invention the lips of each pair may be provided by respective edges of spaced slots or apertures formed in the panel.

According to another feature of the invention the central displaceable part of the panel may comprise a pair of integral panel sections foldable with respect to one another for abutment in face to face relationship to provide an upstanding ridge by which the carrier can be grasped and carried.

According to a further feature of the invention the overlapping portions comprise opposed tongues struck from the central area of the panel and having formed therein cooperating locking tabs for securing together the overlapped tongues of the carrier.

An embodiment of the invention will now be described, by way of example, with reference to accompanying drawings, in which:—

Figure 1 is a plan view of a blank of paperboard or similar foldable sheet material from which a top-gripping carrier according to this invention may be formed, and

Figure 2 is a carrier formed from the blank shown in Figure 1.

Referring to the drawings, there is shown a carrier 10 formed from paperboard or similar foldable sheet material comprising a central part 11 and flank parts 12, 13 respectively. The central part 11 comprises a pair of integral panels 14, 15 hinged together along a longitudinally extending central fold line 16. The flank part 12 is hinged to the panel 14 along an intermittent longitudinal fold line 17 and similarly, the flank part 13 is hinged to the panel 15 along an intermittent longitudinal fold line 18. Struck from the blank 10 between the intermittent portions of the fold line

17 is a pair of projecting tongues 19, 20 from each of which is struck a generally arrow shaped locking tab 21, 22. Similarly, the tongues 23, 24 are struck from the blank between the intermittent portions of the longitudinal fold line 18 each of which is provided with a generally rectangular retaining tab 25, 26 respectively.

The blank is formed to provide a top gripping carrier to accommodate three flanged or rimmed articles such as plastics tubs 'T' and to this end three pairs of apertures 27, 27a; 28, 28a; 29, 29a are struck from the blank. The apertures 27, 28 and 29 are spaced apart in a row and struck from the flank part 12 whereas the apertures 27a, 28a and 29a are all struck from the flank part 13. As can be seen the apertures of each pair are aligned with and opposite one another.

In order to connect the blank to the three flanged tubs 'T' so as to form a completed package, the underside of the blank is brought into

abutment with the tops of the row of tubs 'T' to be connected and the panels 14 and 15 are displaced upwardly out of the plane of the blank so that the undersides of the panels 14, 15 are brought into face to face relationship. In so doing the tongues 19 and 20 are caused to be overlapped beneath the tongues 23, 24 respectively which brings the locking tab 21 into registry with the retaining tab 25 and the locking tab 22 into registry with the retaining tab 26. Moreover, displacement of the central panels 14 and 15 has the effect of bringing the apertures of each pair towards one another until such time as the outer lip 'L' of each aperture engages the side wall 'S' beneath the top flange 'f' of a tub to be connected. It will be appreciated that the lips 'L' of opposed apertures in a pair will thereby grip the tab since the distance between the opposed lips will be somewhat less than the overall diameter of the carton as measured across the top of the flange. In order to enhance the strength of connection each of the flank parts 12, 13 is provided with longitudinally extending fold lines 30, 31 respectively which pass across the tips of the apertures nearest the central panels 14, 15. Fold lines 30, 31 allow the flank elements to bend downwardly about the fold lines so that the lips 'L' exert an upward component of force on the underside of the flanges 'f'.

To maintain the panels 14, 15 displaced out of the plane of the blank suitable machine elements engage the locking apertures 21, 22 and force them through the apertures defined by retaining tabs 25, 26 respectively thus locking tongue 19 to the tongue 23 and tongue 20 to the tongue 24 whereby the blank is maintained in its folded configuration so that the articles are retained in position.

As will be appreciated the displaced central panels 14, 15 provide an upstanding central elongate ridge so forming a handle by which the package may be grasped and carried.

## CLAIMS

1. A carrier (10) for holding together a row of articles having flanged or rimmed tops...

- device comprises a panel formed from foldable sheet material having formed therein for each article a pair of spaced lips (L) for engagement with diametrically opposed portions of the article
- 5 flange or rim, the lips of each pair being movable towards one another by causing a central part (11) of the panel located between the lips to be displaced out of the plane of the panel characterized in that the central part is maintained
- 10 in displaced condition by securing together portions (19, 23; 20, 24) of the panel lying adjacent thereto, which portions are overlapped during displacement of the central portion whereby said lips are brought into engagement
- 15 with the side walls of a suitably sized article beneath the flange or rim to secure that article to the carrier.
2. A carrier according to claim 1, further characterized in that the lips (L) of each pair are
- 20 provided by respective edges of spaced slots (27, 27a) or apertures formed in the panel.
3. A carrier according to claim 1 or claim 2, further characterized in that the central
- 25 displaceable part (11) of the panel may comprise a pair of integral panel sections (14, 15) foldable with respect to one another for abutment in face to face relationship to provide an upstanding ridge by which the carrier can be grasped and carried.
4. A carrier according to any of the preceding
- 30 claims, further characterized in that the overlapping portions comprise opposed tongues (19, 23 and 20, 24) struck from the central areas of the panel and having formed therein cooperating locking tabs (21, 25 and 22, 26) for securing together the overlapped tongues of the carrier.
5. A carrier blank for forming a carrier according to any of the preceding claims.
6. A carrier blank for holding together a row of
- 40 articles having flanged or rimmed tops, substantially as hereinbefore described with reference to and as shown in Figure 1 of the accompanying drawings.
7. A carrier substantially as hereinbefore
- 45 described with reference to, and as shown in, Figure 2 of the accompanying drawings.